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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/550,482	10/13/2006	Yingfu Li	11582-004-999	2965

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EXAMINER	
JARRELL, NOBLE E	
ART UNIT	PAPER NUMBER
1624	
MAIL DATE	DELIVERY MODE
02/19/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/550,482	LI ET AL.	
	Examiner	Art Unit	
	NOBLE JARRELL	1624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 November 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8,10,11,13-16,20 and 21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *2,4 and 5* is/are allowed.

6)☒ Claim(s) *10,11 and 13-16* is/are rejected.

7)☒ Claim(s) *1,3,6-8 and 20* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *11/13/2008*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 13 November 2008 have been fully considered but they are not persuasive. Applicants argue that they are enabled for the treatment of asthma, allergic rhinitis, and eczema. However, the reference cited (White et al., *Journal of Biological Chemistry*, **2000**, *275(47)*, 36626-631, cited in IDS) teach that CCR3 is a possible target for each of these disorders (thus indicating future research is needed to determine if CCR3 is a useful therapeutic target) (page 36631). Applicants are not enabled for treatment of autoimmune disorders because Katschke et al. (*Arthritis & Rheumatism*, **2001**, *44(5)*, 1022-32, cited in IDS) teach that future research is needed to determine if CCR3 is an effective *in vivo* target for treatment of chronic inflammatory diseases (page 1030). Haley et al. (*Circulation*, **2000**, *102*, pages 2185-89, cited in IDS) teach that future research is needed to fully understand the role of CCR3 in atherogenesis (page 2189). Applicants are not enabled for treatment of HIV because Ancuta et al. (*Journal of Immunology*, **2006**, *176*, pages 5760-71, cited in IDS) teach that T-cells expressing CCR3 *may* be preferential sites for HIV infection *in vivo* (page 5769). This teaching suggests that further research is needed to see if this is actually true. Applicants are not enabled for treatment of Alzheimer's disease through CCR3 modulation because Xia et al. (*American Journal of Pathology*, **1998**, *153(1)*, pages 31-37, cited in IDS) teach that it is unclear what role β-chemokines have on neuronal function. AS a result of the unclear role, it is unclear what role they have in Alzheimer's disease pathology.

Information Disclosure Statement

2. The information disclosure statement filed 11/13/2008 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information

or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered. Only the first page of reference C09 has been submitted.

Claim Objections

3. Claims 1, 3, 6-8, 10-11, 13-16, and 20-21 are objected to because of the following informalities: they contain non-elected subject matter. Variable p is 2 in the elected group. Claim 10 is dependent on a cancelled claim. Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 10, 11, 13-16, and 21 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for the treatment of granulomas, does not reasonably provide enablement for the treatment of any other disorder. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention commensurate in scope with these claims.

> The factors to be considered in determining whether a disclosure meets the enablement requirements of 35 U.S.C. 112, first paragraph, have been described in *In re Wands*, 858 F.2d 731, 8 USPQ2d 1400 (Fed. Cir., 1988). The court in Wands states, "Enablement is not precluded by the necessity for some experimentation, such as routine screening. However, experimentation needed to practice the invention must not be undue experimentation. The key word is 'undue', not 'experimentation'" (*Wands*, 8 USPQ2sd 1404). Clearly, enablement of a claimed invention cannot be predicated on the basis of quantity of experimentation required to make or use the invention. "Whether undue experimentation is needed is not a single, simple factual determination, but rather is a conclusion reached by weighing many factual considerations" (*Wands*, 8 USPQ2d 1404). Among these factors are: (1) the nature of the invention; (2) the breadth of the claims; (3) the state of the prior art; (4) the predictability or unpredictability of the art; (5) the relative skill of those in the art; (6) the amount of direction or guidance presented; (7)

the presence or absence of working examples; and (8) the quantity of experimentation necessary.

Consideration of the relevant factors sufficient to establish a *prima facie* case for lack of enablement is set forth herein below:

(1) The nature of the invention and (2) the breadth of the claims:

The claims are drawn to a method of inhibiting CCR3 receptors with compounds where an N-azabicyclo[2.2.2]ocy-3-yl group connected to a SO_2-phenyl-(O or S)-phenyl structure. Thus, the claims taken together with the specification imply the prepared compounds inhibit CCR3 in the treatment of a granuloma.

(3) The state of the prior art and (4) the predictability or unpredictability of the art:

Ponath (*Expert Opinion on Investigational Drugs*, **1998**, *7(1)*, 1-18, cited in previous office action) teaches that CCR3 is linked to treatment of granulomas (section 1.2, page 4).

White et al. (*Journal of Biological Chemistry*, **2000**, *275(47)*, 36626-631, cited in IDS) teach that CCR3 is a possible target for asthma, allergic rhinitis, and eczema (thus indicating future research is needed to determine if CCR3 is a useful therapeutic target)(page 36631).

Katschke et al. (*Arthritis & Rheumatism*, **2001**, *44(5)*, 1022-32, cited in IDS) teach that future research is needed to determine if CCR3 is an effective *in vivo* target for treatment of chronic inflammatory diseases (page 1030).

Haley et al. (*Circulation*, **2000**, *102*, pages 2185-89, cited in IDS) teach that future research is needed to fully understand the role of CCR3 in atherogenesis (page 2189).

Ancuta et al. (*Journal of Immunology*, **2006**, *176*, pages 5760-71, cited in IDS) teach that T-cells expressing CCR3 *may* be preferential sites for HIV infection *in vivo* (page 5769). This teaching suggests that further research is needed to see if this is actually true.

Xia et al. (*American Journal of Pathology*, **1998**, *153(1)*, pages 31-37, cited in IDS) teach that it is unclear what role β-chemokines have on neuronal function. AS a result of the unclear role, it is unclear what role they have in Alzheimer's disease pathology.

(5) The relative skill of those in the art:

Those of relative skill in the art are those with the level of skill of the authors of the references cited to support the examiner's position. The relative skill of those in the art are MD's, PhD's, or those with advanced degrees and the requisite degree of experience in therapeutic methods for treating disorders related to CCR3 receptors.

(6) The amount of direction or guidance presented and (7) the presence or absence of working examples:

The specification has provided guidance for treatment of granulomas through inhibition of a CCR3 receptor.

However, the specification does not provide guidance for treatment of any other disorders beside a granuloma.

(8) The quantity of experimentation necessary:

Considering the state of the art as discussed by the references above, particularly with regards to claims 10, 11, 13-16, and 21, and the high unpredictability in the art as evidenced therein, and the lack of guidance provided in the specification, one of ordinary skill in the art would be burdened with undue experimentation to practice the invention commensurate in the scope of the claims.

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claim 10 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is unclear what the parent claim of claim 10 is because claim 9 has been cancelled in the current claim set.

Double Patenting

8. Claims 7-8, 10-11, and 20 are objected to under 37 CFR 1.75 as being a substantial duplicate of claim 6. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k). Claims 7-8, 10-11, and 20 are duplicate claims of claim 6 because they are pharmaceutical composition claims. The intended use of the pharmaceutical composition does not carry any patentable weight, and that is why the claims are considered duplicative.

Allowable Subject Matter

9. Claims 2, 4, and 5 appear free of the prior art of record.

10. The following is a statement of reasons for the indication of allowable subject matter: The closest prior art is a structure with registry number 1027957-09-0 (displayed in STN search). In this structure, variable R^4 is a NH-azabicyclo[2.2.2]ocy-3-yl group, and variables R^1 and R^2 are each chloro atoms. However, this structure was entered into STN on 13 June 2008, which is after the effective filing date of the instant application (11 March 2004). Therefore, compounds of the elected group are not anticipated or rendered obvious.

Conclusion

11. Applicant's submission of an information disclosure statement under 37 CFR 1.97(c) with the fee set forth in 37 CFR 1.17(p) on 11/13/2008 prompted the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 609.04(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NOBLE JARRELL whose telephone number is (571)272-9077. The examiner can normally be reached on M-F 7:30 A.M - 6:00 P.M. EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. James O. Wilson can be reached on (571) 272-0661. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Noble Jarrell/
Examiner, Art Unit 1624

/James O. Wilson/
Supervisory Patent Examiner, Art Unit 1624